

**Please amend the claims as follows:**

1. (currently amended) In a system having a plurality of computers each having data sets stored thereon, a method of assigning a computer to service a request for a data set, said method comprising the steps of:

- (a) providing a neural network having at least an input layer having J input nodes and an output layer having K output nodes, each of said output nodes associated with one of said computers, and associated weights  $w(j,k)$  between each said input node and each said output node;
- (b) receiving a request for particular data set I;
- (c) imputing to said input layer an input vector having an entry  $R(I)$  at input node I, said entry  $R(I)$  being dependent upon the number of requests for the requested data over a predetermined period of time; and
- (d) selecting a computer assignment associated with a selected one of said output nodes to service said data request, where said selected output node is associated with a specific weight, said specific weight selected to minimize a predetermined metric measuring the distance between said vector entry  $R(I)$  and the weights  $w(I,k)$  associated with said input node I and said output nodes;
- (e) updating said specific weight by modifying said specific weight with a first factor dependent said metric distance between said vector entry  $R(I)$  and said specific weight and a second factor dependent upon a means to balance the load across a subset of said output nodes.

2-4 (canceled)

5. (currently amended) The method of claim 1-4 where said means to balance the load across a subset of said output nodes is dependent upon the number of data requests serviced by said subset of said output nodes over said predetermined period of time divided by the number of output nodes in said subset of said output nodes.

6. (currently amended) In a system having a plurality of computers each having data sets stored thereon, a method of assigning a computer to service a request for a data set, said method comprising the steps of:

(a) providing a neural network having at least an input layer having J input nodes and an output layer having K output nodes, each of said output nodes associated with one of said computers, and associated weights  $w(j,k)$  between each said input node and each said output node;

(b) receiving a request for particular data set I;

(c) inputting to said input layer an input vector having an entry  $R(I)$  at input node I, said entry  $R(I)$  being dependent upon the number of requests for the requested data over a predetermined period of time and ~~the method of claim 2~~ wherein  $R(I)$  is proportional to the ratio of (the number of previous requests for the requested data set) and (the number of previous requests for a subset of all data sets), over said predetermined period of time;

(d) selecting a computer assignment associated with a selected one of said output nodes to service said data request, where said selected output node is associated with a

specific weight, said specific weight selected to minimize a predetermined metric measuring the distance between said vector entry  $R(I)$  and the weights  $(I,k)$  associated with said input node  $I$  and said output nodes; and  
(e) updating said specific weight.

7. (currently amended) In a system having a plurality of computers each having data sets stored thereon, a method of assigning a computer to service a request for a data set, said method comprising the steps of:

(a) providing a neural network having at least an input layer having  $J$  input nodes and an output layer having  $K$  output nodes, each of said output nodes associated with one of said computers, and associated weights  $w(j,k)$  between each said input node and each said output node;

(b) receiving a request for particular data set  $I$ ;

(c) imputing to said input layer an input vector having an entry  $R(I)$  at input node  $I$ , said entry  $R(I)$  being dependent upon the number of requests for the requested data over a predetermined period of time and

(d) selecting a computer assignment associated with a selected one of said output nodes to service said data request, where said selected output node is associated with a specific weight. The method of claim 2 wherein each output node and is associated with a neighborhood of other output nodes said specific weight selected to minimize a predetermined metric measuring the distance between said vector entry  $R(I)$  and the weights  $(I,k)$  associated with said input node  $I$  and said output nodes; and

(e) updating said specific weight, and said step of updating said specific weight includes updating each weight in said neighborhood of said output node associated with said specific weight.

8. (currently amended) In a system having a plurality of computers each having data sets stored thereon, a method of assigning a computer to service a request for a data set, said method comprising the steps of:

(a) providing a neural network having at least an input layer having J input nodes and an output layer having K output nodes, each of said output nodes associated with one of said computers, and associated weights  $w(j,k)$  between each said input node and each said output node;

(b) receiving a request for particular data set I;

(c) imputing to said input layer an input vector having an entry  $R(I)$  at input node I, said entry  $R(I)$  being dependent upon the number of requests for the requested data over a predetermined period of time and

(d) selecting a computer assignment associated with a selected one of said output nodes to service said data request, where said selected output node is associated with a specific weight, said specific weight selected to minimize a predetermined metric measuring the distance between said vector entry  $R(I)$  and the weights  $w(I,k)$  associated with said input node I and said output nodes; and

(e) updating said specific weight ~~The method of claim 2 where said update is according~~ to the formula  $W(I,j)=W(I,j) + \alpha((R(I)-w(I,j)) + \beta(\sum W(i,k) - \gamma W(I,j)))$ , where alpha, beta and gamma are pre-determined constants.

9. (currently amended) The method of ~~step~~-claim 1 where said input vector's components, other than said component  $R(I)$  associated with said input node  $I$ , are of value zero.

10. (currently amended) In a web farm of servers, a method of selecting a server to service a user request for a data set comprising the steps of:

- (a) providing a neural network having at least an input layer having  $J$  input nodes and an output layer having  $K$  output nodes, each of said output nodes associated with one of said servers, and associated weights  $w(j,k)$  between each said input node and each said output node;
- (b) receiving a request for particular data set  $I$ ;
- (c) imputing to said input layer an input vector having an entry  $R(I)$  at input node  $I$ , said entry  $R(I)$  being dependent upon the number of requests for the requested data over a predetermined period of time,
- (d) selecting a server assignment associated with one of said output nodes to service said data request, where said output node is associated with a specific weight, said specific weight selected to minimize a predetermined metric measuring the distance between said vector entry  $R(I)$  and the weights  $w(I,k)$  associated with said input node  $I$  and said output nodes;
- (e) updating said specific weight by modifying said specific weight with a first factor dependent said metric distance between said vector entry  $R(I)$  and said specific weight and a second factor dependent upon a means to balance the load across a subset of said output nodes.

11. (previously presented) A method implemented in a web farm according to claim 11, where said method is implemented on at least one server in said web farm.

12. (previously presented) A method implemented in a web farm according to claim 11 where said method is implemented on at least one router in said web farm.

13. (previously presented) The method according to claim 1 further comprising the step of transmitting said request to said server associated with said server assignment.

14. (currently amended) A computer readable storage medium containing computer executable code for performing a method of assigning a computer from a set of computers to service a request for a data set, said method comprising the steps specified in claim 1 ~~of:~~

~~(a) — associating for each data set  $I$  a series of weights  $w(I,j)$ , where  $j=1, \text{number of computers in the set of computers}$ , associating with each individual weight  $w(I,j)$  one of said computers from said set of computers;~~

~~(b) — receiving a request for particular data set  $I_i$ ;~~

~~(c) — associating with said requested data set a value  $R(I)$  being dependent upon the number of requests for the requested data set over a predetermined period of time;~~

~~(d) — selecting a computer assignment associated with a specific one of said series of weights  $w(I,j)$  to service said data request, where said specific weight is selected to minimize a predetermined metric measuring the distance between said value  $R(I)$  and the weights  $w(I,k)$  associated with said particular data set  $I_i$ ;~~

15.(currently amended) A computer readable storage medium containing computer executable code for performing a method of assigning a computer for a set of computers to service a request for a data set, said method comprising the steps of:

- (a) providing a neural network having at least an input layer having J input nodes and an output layer having K output nodes, each of said output nodes associated with one of said computers, and associated weights  $w(j,k)$  between each said input node and each said output node;
- (b) receiving a request for particular data set I;
- (c) imputing inputting to said input layer an input vector having an entry  $R(I)$  at input node I, said entry  $R(I)$  being dependent upon the number of requests for the requested data over a predetermined period of time,
- (d) selecting a computer assignment associated with of one of said output nodes to revise said data request, where said output node is associated with a specific weight, said specific weight selected to minimize a predetermined metric measuring the distance between said vector entry  $R(I)$  and the weights  $(I,k)$  associated with said input node I and said output nodes.

16. (new) A computer readable storage medium containing computer executable code for performing a method of assigning a computer for a set of computers to service a request for a data set, said method comprising the steps specified in claim 7.

17. (new) A computer readable storage medium containing computer executable code for performing a method of assigning a computer for a set of computers to service a request for a data set, said method comprising the steps specified in claim 8.